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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,290	04/19/2004	Kazuo Sato	252002US2CONT	9908
22850	7590	04/13/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DIAMOND, ALAN D	
			ART UNIT	PAPER NUMBER

1753

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/826,290	Applicant(s) SATO ET AL.	
	Examiner Alan Diamond	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Comments

1. Applicant's amendment filed April 4, 2006 has been entered. The finality of the previous Office action is withdrawn in view of the new rejection that follows.

Claim Rejections - 35 USC §102/ 103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6, and 13 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamamoto et al (U.S. Patent 6,750,394), which is already of record in the instant application. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Yamamoto et al teaches a substrate with a transparent conductive oxide film, comprising a substrate (11a) and a transparent conductive oxide film, e.g., zinc oxide film, SnO_2 , or ITO, etc, film (11b) provided on the substrate and constituted by a plurality of ridges and flat portions, as schematically seen in Yamamoto et al's Figure 1 (see also col. 4, line 43 through col. 5, line 50; and col. 6, line 8 through col. 7, line 46; and Examples 1-10 at cols. 10-23). The flat portions of Yamamoto et al's transparent conductive oxide are provided by the holes at the surface, which have a diameter of 200 to 2000 nm, i.e., from 0.2 to 2 μm (col. 6, lines 7-8), while the ridges are the higher areas between the holes, as seen in Figure 1. In Example 1 at cols. 10-12, the number density of holes is $0.8 \mu\text{m}^{-2}$, with a hole diameter of approximately 200 to 1400 nm, i.e., 0.2 μm to 1.4 μm (see col. 11, lines 28-33). The Examiner at once envisages 0.2 μm holes between ridges, which, it is the Examiner's position, corresponds to the instant ridge continuous portion due to the very small hole. Indeed, as seen schematically in instant Figure 1, the very small hole between the continuous ridge portion near reference signs 2 and 5 (i.e., the last two ridges seen at the right side in instant Figure 1) is a very small hole compared to the flat portion near reference sign 3 in instant Figure 1. Furthermore, the Examiner at once envisages 1.4 μm holes prepared in Yamamoto et al's Example 1, which would provide holes like the claimed "flat portion", and thus, provide discontinuous ridges with the flat portion between the ridges. The surfaces of Yamamoto et al's ridges and flat portions have a plurality of continuous protrusions, i.e., "irregularities" (as seen in Yamamoto et al's Figure 1), wherein the

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irregularities have a height difference of preferably 20 to 200 nm, i.e., these irregularities are "micron-sized" protrusions as here claimed (see also col. 6, lines 7-11).

With respect to claim 2, the ratio of the irregularity size to space, i.e. instant height to basal plane diameter ratio, is 0.1 to 1 (col. 6, lines 7-25; and col. 11, line 48), while the space between each irregularity, i.e. instant basal plane diameter, is from 0.1 to 0.9 μm (col. 11, lines 45-46).

It is the Examiner's position that the sheet resistance and haze of instant claims 6 and 13 are inherent in the substrate with transparent oxide prepared in Yamamoto et al's Examples 1-10.

Since Yamamoto et al teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

In addition, the instant ridges having continuous and discontinuous portions, and the instant the sheet resistance and haze would obviously have been present once the substrates with transparent oxide prepared in Yamamoto et al's Examples 1-10 have been provided. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond
Primary Examiner
Art Unit 1753

Alan Diamond
April 12, 2006

A handwritten signature in black ink, appearing to read 'Alan Diamond', with a stylized flourish at the end.